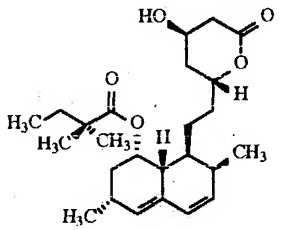
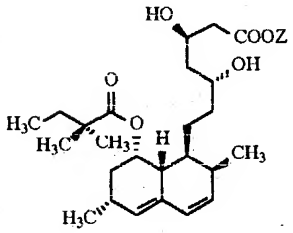
WE CLAIM:

1. A process for lactonization to produce highly pure simvastatin of Formula I



Formula I

which comprises the steps of:

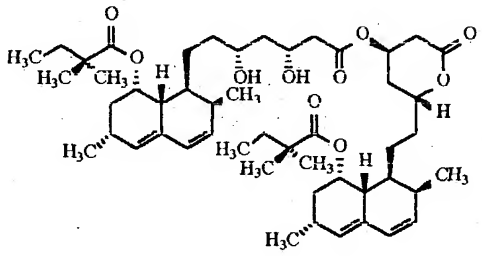


Formula II

starting with a compound of Formula II where Z is H or NH_4,

mixing in a mixture of acetonitrile and glacial acetic acid,

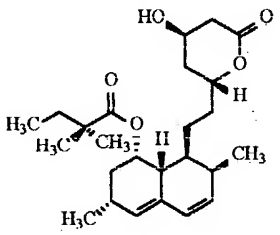
reacting the mixture under anhydrous conditions wherein the dimer impurity of Formula III formed is less than 0.1%,



Formula III

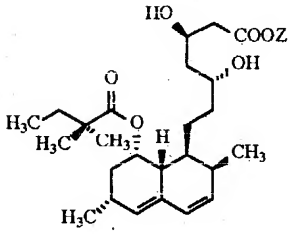
adding water to the reaction mixture to form a precipitate of simvastatin of Formula I.

2. The process according to claim 1 wherein Z is NH_4.
3. The process according to claim 1 wherein the said reaction temperature is 50-60°C.
4. The process according to claim 1where the said reaction temperature is 60-70°C.
5. A process for lactonization to produce highly pure simvastatin of Formula I



Formula I

comprising the steps of :

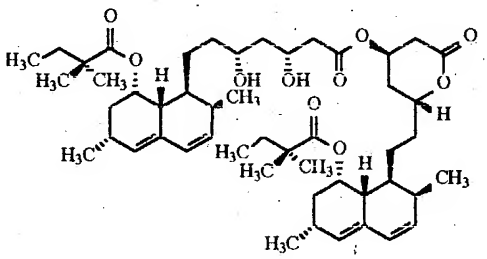


Formula II

starting with a compound of Formula II where Z is H or NH_4,

mixing in a mixture of acetonitrile and glacial acetic acid,

reacting the mixture under anhydrous conditions wherein the dimer impurity of Formula III formed is less than 0.1%,



Formula III

precipitating simvastatin of Formula I from the reaction mixture, purifying the said Simvastatin precipitate.

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